AMENDMENTS TO THE CLAIMS

1. 1. (Currently Amended) A ~~method~~ Computer implemented method of managing electronic mail, the method comprising the

2. steps of:

3. automatically generating a set of criteria based on contents of a plurality of electronic

4. mail messages received over a network;

5. wherein the step of automatically generating a set of criteria includes~~,~~

6. automatically determining what particular content to use to classify electronic

7. mail messages by performing steps that include determining that a threshold

8. number of said plurality of electronic mail messages have a particular content;

9. in response to determining that a threshold number of said plurality of electronic mail

10. messages have ~~a~~said particular content, generating criteria that classifies

11. electronic mail messages that have said particular content as a first type of

12. electronic mail;

13. receiving an electronic mail message over said network;

14. determining whether said electronic mail message satisfies said set of criteria;

15. if said electronic mail message satisfies said set of criteria, then processing said electronic

16. mail message as said first type of electronic mail;~~and~~

17. if said electronic mail message does not satisfy said set of criteria, then processing said

18. electronic mail message as a second type of electronic mail;

19. wherein said first type of electronic mail is processed differently than said second type of

20. electronic mail~~.~~; and

21   wherein at least one message of said plurality of electronic mail messages has not been

22   classified, before determining that a threshold number of said plurality of

23   electronic mail messages have a particular content, as belonging to said first type.

1   2.   (Original) The method of Claim 1 wherein:

2   the method further comprises the step of generating a message signature for said

3   electronic mail message based on contents of said electronic mail message; and

4   the step of determining whether said electronic mail message satisfies said set of criteria

            includes determining whether said message signature satisfies said set of criteria.

1   3.   (Previously Presented) The method of Claim 1, wherein determining that a threshold

2   number of said plurality of electronic mail messages have a particular content includes

3   determining that at least a portion of each of said plurality of electronic mail messages

4   have said particular content.

1   4.   (Currently Amended) The method of Claim 1 wherein the step of generating a set of

2   criteria based on contents of a plurality of electronic mail messages received over said

3   network includes tracking how many message signature elements of said plurality of

4   electronic mail messages match.

1   5.   (Currently Amended) The method of Claim 1 wherein the step of generating a set of

2   criteria based on contents of a plurality of electronic mail messages received over said

3   network includes the steps of:

3

4   generating message signatures for each electronic mail message of said plurality of

5   electronic mail messages, wherein each message signature includes one or more

6   message signature elements; and

7   counting how many of said one or more message signature elements match message

8   signature elements from other message signatures.

1 6.   (Currently Amended) The method of Claim 5 wherein the step of determining whether

2   said electronic mail message satisfies said set of criteria includes determining whether a

3   message signature generated for said electronic mail message includes at least one

4   message signature element that matches a threshold number of message signature

5   elements of previously generated message signatures.

1 7.   (Currently Amended) The method of Claim 6 wherein the step of determining whether a

2   message signature generated for said electronic mail message includes at least one

3   message signature element that matches a threshold number of message signature

4   elements, further includes determining whether a message signature generated for said

5   electronic mail message includes at least one message signature element that matches a

6   threshold number of message signature elements of previously generated message

7   signatures that are associated with a period of time.

1 8.   (Original) The method of Claim 1 wherein the step of processing said electronic mail

2   message as a first type of electronic mail includes adding a bulk electronic mail flag to

3   said electronic mail message.

1   9.   (Original) The method of Claim 8, further including the steps of:

2   after processing said electronic mail message as a first type of electronic mail,

3   transmitting said electronic mail message to an electronic mail server;

4   said electronic mail server receiving said electronic mail message;

5   said electronic mail server determining whether said electronic mail message contains

6   said bulk electronic mail flag; and

7   if said electronic mail message contains said bulk electronic mail flag, then processing

8   said electronic mail message without further verifying whether said electronic

9   mail message is bulk electronic mail.

Computer implemented

1   10.   (Currently Amended) A method of managing electronic mail, the method comprising the

2   steps of:

3   a central server receiving from an electronic mail server a message signature generated

4   from an electronic mail message;

5   *the* an electronic mail server determining whether said message signature satisfies a set of

6   criteria based on message signatures previously received by said central server

7   from a set of electronic mail servers;

8   wherein said set of criteria classifies said electronic mail message (and a threshold number

9   of electronic mail messages as having a particular content;)

10   if said received ~~data~~ message signature satisfies a set of criteria, then said electronic mail

11   server processing said electronic mail message as a bulk electronic mail message-;

12   and

13   wherein the step of said electronic mail server determining whether said message

14   signature satisfies a set of criteria includes determining whether a portion of said

15   message signature matches a portion of each of a threshold number of message

16   signatures previously received by said central server from said set of electronic

17   mail servers.

1   11.   (Canceled)

1   12.   (Currently Amended) The method of Claim 11,10, wherein:

2   the step of a central server receiving from an electronic mail server a message signature

3   includes receiving a set of one or more values generated by a one-way hash

4   function; and

5   the step of said electronic mail server determining whether a portion of said message

6   signature matches includes determining whether at least one of said set of one or

7   more values matches a threshold number of previously received values generated

8   by a one-way hash function.

1   13.   (Original) The method of Claim 12, the method further including the step of transmitting

2   one or more messages to said electronic mail server specifying changes to one or more

3   routines invoked by said electronic mail server to generate message signatures.

1   14.   (Original) The method of Claim 13, wherein the step of transmitting one or more

2   messages includes transmitting platform-independent byte code.

1   15.   (Currently Amended) A *computer implemented* method of managing electronic mail transmitted over a network,

2   the method comprising the steps of:

3   a central server receiving from a set of electronic mail servers message signatures

4   generated from electronic mail messages received by said set of electronic mail

5   servers, wherein each message signature of said includes one or more message signature

6   elements; ^ one of said

7   said central server generating counts of how many times said one or more message

8   signature elements are matched by message signature elements from message

9   signatures generated for other electronic mail messages; and

10   said central server transmitting a message reflecting said counts.

1   16.   (Currently Amended) The method of Claim 15, wherein:

2   the step of a central server receiving includes receiving a particular recipient signature

3   associated with a particular message signature; and

4   the step of generating counts includes generating counts of how many times said one or

5   more message signature elements match message signature elements that are:

6   generated for other electronic mail messages, and

7   associated with a recipient signature that differs from said particular recipient

8   signature.

1   17.   (Original) The method of Claim 16, wherein the step of transmitting messages reflecting

2   said counts includes transmitting said counts.

1   18.   (Currently Amended) The method of Claim 16, wherein the step of transmitting messages

2   reflecting said counts includes transmitting message signature elements associated with

3   counts greater than a threshold.

1 19 - 25.   (Canceled)

1   26.   (Currently Amended) A computer-readable medium carrying one or more sequences of

2   one or more instructions for managing electronic mail, wherein the execution of the one

3   or more sequences of the one or more instructions causes the one or more processors to

4   perform the steps of:

5   automatically generating a set of criteria based on contents of a plurality of electronic

6   mail messages received over a network;

7   wherein the step of automatically generating a set of criteria includes:

8   automatically determining what particular content to use to classify electronic

9   mail messages by performing steps that include determining that a threshold

10   number of said plurality of electronic mail messages have a particular content;

11   in response to determining that a threshold number of said plurality of electronic mail

12   messages have a particular content, generating criteria that classifies electronic

13   mail messages that have said particular content as a first type of electronic mail;

14   receiving an electronic mail message over said network;

15   determining whether said electronic mail message satisfies said set of criteria;

16   if said electronic mail message satisfies said set of criteria, then processing said electronic

17   mail message as said first type of electronic mail; and

18   if said electronic mail message does not satisfy said set of criteria, then processing said

19   electronic mail message as a second type of electronic mail;

20   wherein said first type of electronic mail is processed differently than said second type of

21   electronic mail.; and

22   <u>wherein at least one message of said plurality of electronic mail messages has not been</u>

23   <u>classified, before determining that a threshold number of said plurality of</u>

24   <u>electronic mail messages have said particular content, as belonging to said first</u>

25   <u>type.</u>

1   27.   (Original) The computer-readable medium of Claim 26 wherein:

2   the computer-readable medium further comprises sequences of instructions for

3   performing the step of generating a message signature for said electronic mail

4   message based on contents of said electronic mail message; and

5   the step of determining whether said electronic mail message satisfies said set of criteria

6   includes determining whether said message signature satisfies said set of criteria.

1   28.   (Previously Presented) The computer-readable medium of Claim 26 wherein determining

2   that a threshold number of said plurality of electronic mail messages have a particular

3   content includes determining that at least a portion of each of said plurality of electronic

4   mail messages have said particular content.

1   29.   (Currently Amended) A computer-readable medium carrying one or more sequences of

2   one or more instructions for managing electronic mail, wherein the execution of the one

3   or more sequences of the one or more instructions causes the one or more processors to *computer?*

4   perform the steps of:

5   a central server receiving from an electronic mail server a message signature generated

6   from an electronic mail message; *received by the electronic mail server* *who receiving the / originate?*

9

7   an electronic mail server determining whether said message signature satisfies a set of

8   criteria based on message signatures previously received by said central server

9   from a set of electronic mail servers; and

10 wherein said set of criteria classifies said electronic mail message and a threshold number

11 of electronic mail messages as having a particular content;

12 if said received ~~data~~message signature satisfies a set of criteria, then said electronic mail

13 server processing said electronic mail message as a bulk electronic mail message~~.~~;

14 and

15 wherein the step of said electronic mail server determining whether said message

16 signature satisfies a set of criteria includes determining whether a portion of said

17 message signature matches a portion of each of a threshold number of message

18 signatures previously received by said central server from said set of electronic

19 mail servers.

1   30.   (Canceled)

1   31.   (Original) A computer-readable medium carrying one or more sequences of one or more

2   instructions for managing electronic mail, wherein the execution of the one or more

3   sequences of the one or more instructions causes the one or more processors to perform

4   the steps of:

5   a central server receiving from a set of electronic mail servers message signatures

6   generated from electronic mail messages received by said set of electronic mail

7   servers, wherein each message signature includes one or more message signature

8   elements;

9   said central server generating counts of how many times said one or more message

10   signature elements are matched by message signature elements from message

11   signatures generated for other electronic mail messages; and

12   said central server transmitting a message reflecting said counts.

1   32 – 37 (Canceled)

1   38.   (New) The computer-readable medium of Claim 26 wherein the step of generating a set

2   of criteria based on contents of a plurality of electronic mail messages received over said

3   network includes tracking how many message signature elements of said plurality of

4   electronic mail messages match.

1   39.   (New) The computer-readable medium of Claim 26 wherein the step of generating a set

2   of criteria based on contents of a plurality of electronic mail messages received over said

3   network includes the steps of:

4   generating message signatures for each electronic mail message of said plurality of

5   electronic mail messages, wherein each message signature includes one or more

6   message signature elements; and

7   counting how many of said one or more message signature elements match message

8   signature elements from other message signatures.

1   40.   (New) The computer-readable medium of Claim 39 wherein the step of determining

2   whether said electronic mail message satisfies said set of criteria includes determining

3   whether a message signature generated for said electronic mail message includes at least

11

4   one message signature element that matches a threshold number of message signature

5   elements of previously generated message signatures.

1   41.   (New) The computer-readable medium of Claim 40 wherein the step of determining

2   whether a message signature generated for said electronic mail message includes at least

3   one message signature element that matches a threshold number of message signature

4   elements further includes determining whether a message signature generated for said

5   electronic mail message includes at least one message signature element that matches a

6   threshold number of message signature elements of previously generated message

7   signatures that are associated with a period of time.

1   42.   (New) The computer-readable medium of Claim 26 wherein the step of processing said

2   electronic mail message as a first type of electronic mail includes adding a bulk electronic

3   mail flag to said electronic mail message.

1   43.   (New) The computer-readable medium of Claim 42, the steps further including

2   after processing said electronic mail message as a first type of electronic mail,

3   transmitting said electronic mail message to an electronic mail server;

4   said electronic mail server receiving said electronic mail message;

5   said electronic mail server determining whether said electronic mail message contains

6   said bulk electronic mail flag; and

7   if said electronic mail message contains said bulk electronic mail flag, then processing

8   said electronic mail message without further verifying whether said electronic

9   mail message is bulk electronic mail.

1   44.   (New) The computer-readable medium of Claim 29, wherein:

2   the step of a central server receiving from an electronic mail server a message signature

3   includes receiving a set of one or more values generated by a one-way hash

4   function; and

5   the step of said electronic mail server determining whether a portion of said message

6   signature matches includes determining whether at least one of said set of one or

7   more values matches a threshold number of previously received values generated

8   by a one-way hash function.

1   45.   (New) The computer-readable medium of Claim 44, the steps further including the step

2   of transmitting one or more messages to said electronic mail server specifying changes to

3   one or more routines invoked by said electronic mail server to generate message

4   signatures.

1   46.   (New) The computer-readable medium of Claim 45, wherein the step of transmitting one

2   or more messages includes transmitting platform-independent byte code.

1   47.   (New) The computer-readable medium of Claim 31, wherein:

2   the step of a central server receiving includes receiving a particular recipient signature

3   associated with a particular message signature; and

4   the step of generating counts includes generating counts of how many times said one or

5   more message signature elements match message signature elements that are:

6   generated for other electronic mail messages, and

7   associated with a recipient signature that differs from said particular recipient

8   signature.

1   48.   (New) The computer-readable medium of Claim 47, wherein the step of transmitting

2   messages reflecting said counts includes transmitting said counts.

1   49.   (New) The computer-readable medium of Claim 47, wherein the step of transmitting

2   messages reflecting said counts includes transmitting message signature elements

3   associated with counts greater than a threshold.

1   50.   (New) A method of managing electronic mail, the method comprising the steps of:

2   automatically generating a set of criteria based on contents of a plurality of electronic

3   mail messages received over a network;

4   wherein the step of automatically generating a set of criteria includes, in response to

5   determining that a threshold number of said plurality of electronic mail messages

6   have a particular content, generating criteria that classifies electronic mail

7   messages that have said particular content as a first type of electronic mail;

8   receiving an electronic mail message over said network;

9   determining whether said electronic mail message satisfies said set of criteria;

10   if said electronic mail message satisfies said set of criteria, then processing said electronic

11   mail message as said first type of electronic mail;

12   if said electronic mail message does not satisfy said set of criteria, then processing said

13   electronic mail message as a second type of electronic mail;

14   wherein said first type of electronic mail is processed differently than said second type of

15   electronic mail; and

16   wherein the step of generating a set of criteria based on contents of a plurality of

17   electronic mail messages received over said network includes the steps of:

18   generating message signatures for each electronic mail message of said plurality

19   of electronic mail messages, wherein each message signature includes one

20   or more signature elements; and

21   counting how many of said one or more signature elements match signature

22   elements from other message signatures.

1   51.   (New) The method of Claim 50 wherein the step of determining whether said electronic

2   mail message satisfies said set of criteria includes determining whether a message

3   signature generated for said electronic mail message includes at least one signature

4   element that matches a threshold number of signature elements of previously generated

5   message signatures.

1   52.   (New) The method of Claim 51 wherein the step of determining whether a message

2   signature generated for said electronic mail message includes at least one signature

3   element that matches a threshold number of signature elements further includes

4   determining whether a message signature generated for said electronic mail message

5   includes at least one signature element that matches a threshold number of signature

6   elements of previously generated message signatures that are associated with a period of

7   time.

1   53.   (New) A computer-readable medium carrying one or more sequences of one or more

2   instructions for managing electronic mail, wherein the execution of the one or more

3   sequences of the one or more instructions causes the one or more processors to perform

4   the steps of:

5   automatically generating a set of criteria based on contents of a plurality of electronic

6   mail messages received over a network;

7   wherein the step of automatically generating a set of criteria includes, in response to

8   determining that a threshold number of said plurality of electronic mail messages

9   have a particular content, generating criteria that classifies electronic mail

10   messages that have said particular content as a first type of electronic mail;

11   receiving an electronic mail message over said network;

12   determining whether said electronic mail message satisfies said set of criteria;

13   if said electronic mail message satisfies said set of criteria, then processing said electronic

14   mail message as said first type of electronic mail;

15   if said electronic mail message does not satisfy said set of criteria, then processing said

16   electronic mail message as a second type of electronic mail;

17   wherein said first type of electronic mail is processed differently than said second type of

18   electronic mail; and

19   wherein the step of generating a set of criteria based on contents of a plurality of

20   electronic mail messages received over said network includes the steps of:

21   generating message signatures for each electronic mail message of said plurality

22   of electronic mail messages, wherein each message signature includes one

23   or more signature elements; and

24   counting how many of said one or more signature elements match signature

25   elements from other message signatures.

1   54.   (New) The computer-readable medium of Claim 53 wherein the step of determining

2   whether said electronic mail message satisfies said set of criteria includes determining

3   whether a message signature generated for said electronic mail message includes at least

4   one signature element that matches a threshold number of signature elements of

5   previously generated message signatures.

1   55.   (New) The computer-readable medium of Claim 54 wherein the step of determining

2   whether a message signature generated for said electronic mail message includes at least

3   one signature element that matches a threshold number of signature elements further

4   includes determining whether a message signature generated for said electronic mail

5   message includes at least one signature element that matches a threshold number of

6   signature elements of previously generated message signatures that are associated with a

7   period of time.